

Side Event, COP30, UNFCCC

# The Role of Universities in Achieving Net-Zero by 2050

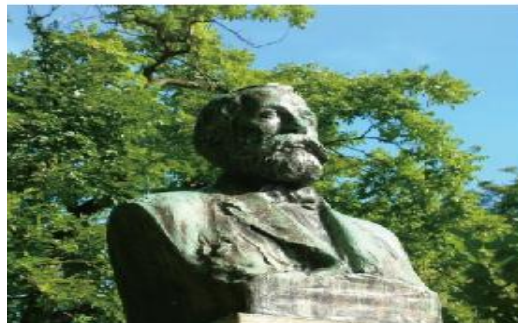
**YAMAUCHI Taro**

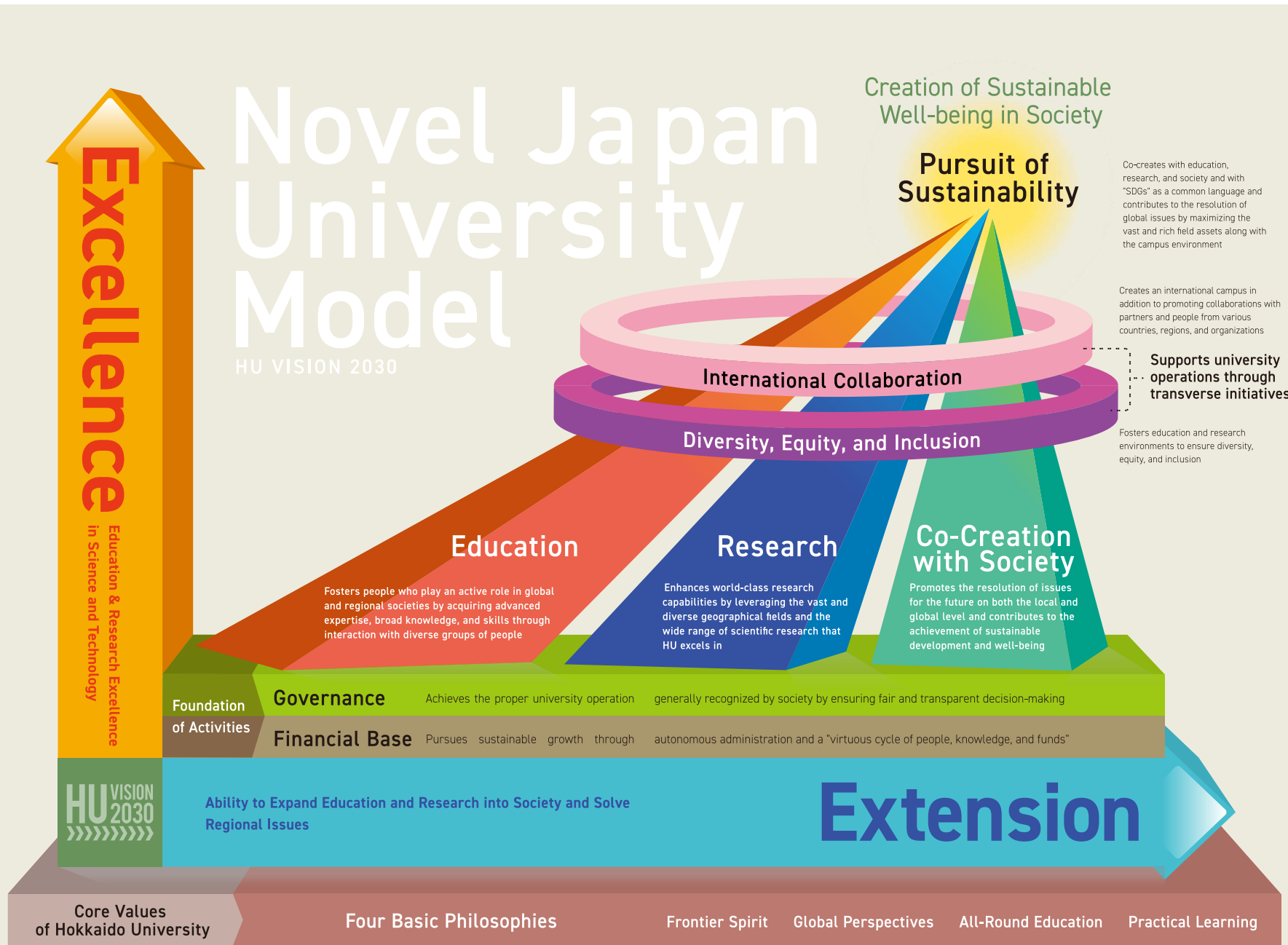
Professor, Hokkaido University

November 12, 2025



**HOKKAIDO**  
UNIVERSITY





**HU VISION 2030**

**Ability to Expand Education and Research into Society and Solve Regional Issues**

**Extension**

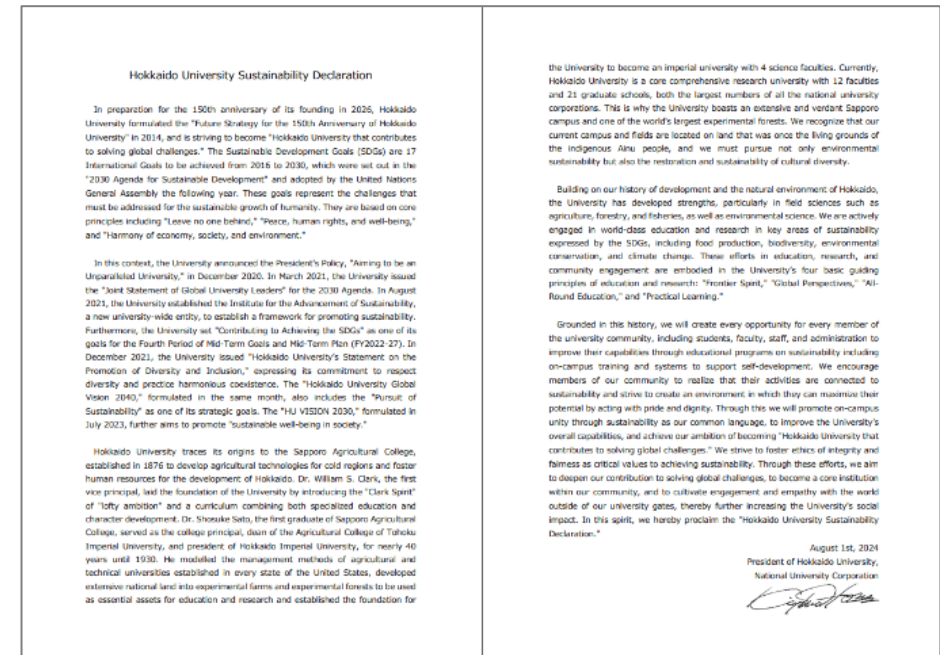
**Core Values of Hokkaido University**

**Four Basic Philosophies**

Frontier Spirit    Global Perspectives    All-Round Education    Practical Learning



August 1st, 2024  
President of Hokkaido  
University,  
National University  
Corporation  
Kiyohiro HOUKIN

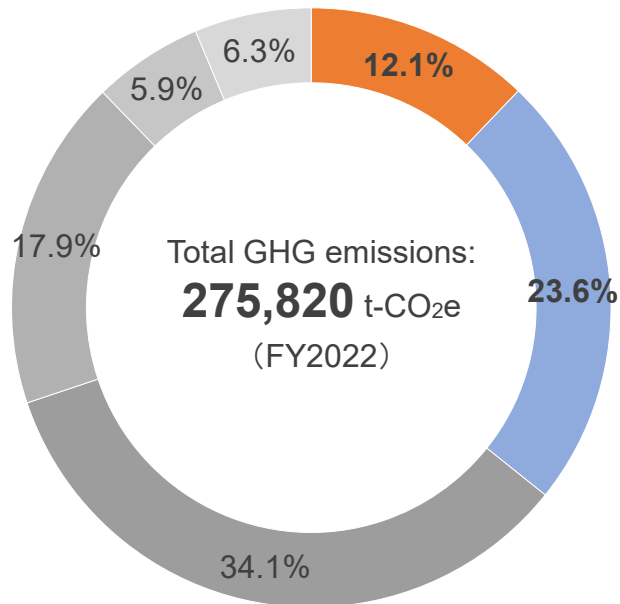


- Encourage all community members to recognize that their activities are **connected to sustainability**.
- Create an environment where individuals can **maximize their potential with pride and dignity**.
- **Promote on-campus unity** by using sustainability as a common language.
- Strengthen the University's overall capabilities and pursue the goal of **contributing to global challenges**.
- **Foster ethical values**—especially **integrity and fairness**—as essential to sustainability.
- Deepen our contribution to solving global challenges and become a core institution within the local community.
- Cultivate **engagement and empathy** with society beyond the campus to further **enhance the University's social impact**.



<https://www.sustainability.hokudai.ac.jp/repository/ghg/>

## HU GHG inventory



### Scope1

**33,478 t-CO<sub>2</sub>e**

• CO <sub>2</sub> (Originated from energy)	30,433 t-CO <sub>2</sub> e
• CO <sub>2</sub> (Originated from non-energy)	44 t-CO <sub>2</sub> e
• CH <sub>4</sub>	546 t-CO <sub>2</sub> e
• N <sub>2</sub> O	317 t-CO <sub>2</sub> e
• HFCs	2,125 t-CO <sub>2</sub> e
• PFCs	0 t-CO <sub>2</sub> e
• SF <sub>6</sub>	12 t-CO <sub>2</sub> e
• NF <sub>3</sub>	0 t-CO <sub>2</sub> e

### Scope2 (※Market-based)

**65,116 t-CO<sub>2</sub>e**

• Indirect emissions	65,116 t-CO <sub>2</sub> e
----------------------	----------------------------

### Scope3

**177,226 t-CO<sub>2</sub>e**

• Category 1	94,071 t-CO <sub>2</sub> e
• Category 2	49,396 t-CO <sub>2</sub> e
• Category 3	16,367 t-CO <sub>2</sub> e
• Category 4-15	17,393 t-CO <sub>2</sub> e

### Total (Scope1+2)

**98,594 t-CO<sub>2</sub>e**

### Total (Scope1+2+3)

**275,820 t-CO<sub>2</sub>e**

- Developed a comprehensive GHG emissions database as a first step toward carbon neutrality.
- Inventory covers all university sites and activities.
- Includes all 7 GHGs regulated under the Paris Agreement (CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, HFCs, PFCs, SF<sub>6</sub>, NF<sub>3</sub>).
- Accounts for emissions across Scope 1, Scope 2, and all Scope 3 categories.
- Second university in Japan—after the University of Tokyo—to calculate all 7 GHGs including Scope 3.

## Times Higher Education Impact Rankings

- Global performance tables that assess universities against the United Nations' Sustainable Development Goals (SDGs)
- The rankings are based on universities' teaching, research, outreach and stewardship.
- Both the "Overall Ranking" and the "Sustainable Development Goals (SDGs) Rankings" are published.
- More than 2,500 universities from 130 countries or territories participated.



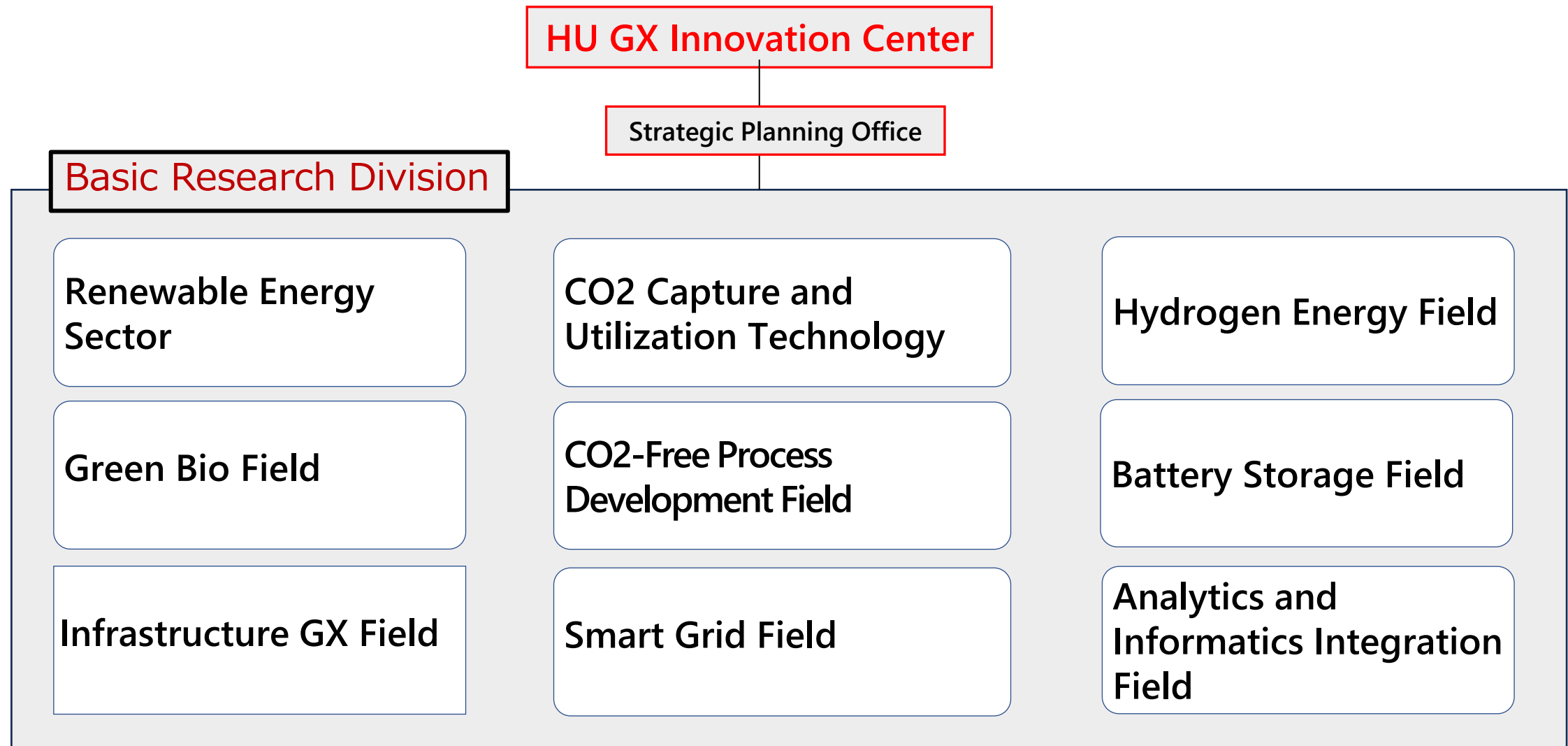
Source : THE impact rankings  
<https://www.timeshighereducation.com/impactrankings>

## OVERALL RANKING

**1st place** for **Six** consecutive years in Japan

- Ranked tied for **44th** out of **2,318** universities worldwide (TOP2%)
- The only university in Japan ranked in the global Top 100

- Form an outstanding research hub that integrates Hokkaido University's GX expertise.
- Promote education and research focused on societal implementation.
- Maximize Hokkaido's renewable energy potential through these initiatives.



## Green Human Resources:

- Individuals who accelerate Green Transformation (GX).
- Leverage local history, culture, and unique community characteristics.
- Drive behavioral change from their own roles and positions.
- Act from the perspectives of “pursuing sustainability” and “contributing to the SDGs.”

### Outdoor-based active learning



### Introduction to the UN SDGs



### Sapporo Zero Carbon Future



### Carbon Neutrality Summer Short-Term Learning Program



# Thank you for your attention

## Beautiful Seasonal Scenes from the Campus

